

Utah Department of Transportation Traffic Management Division

December 2015

Monthly Report



2060 South 2760 West Salt Lake City, Utah 84104 801-887-3710 www.udottraffic.utah.gov



Mission of the Traffic Management Division

- To Support UDOT and the Department of Public Safety to Achieve Zero Fatalities.
- To Help Provide Reliable and Efficient Travel Throughout Utah.
- To Provide Useful and Timely Real-time Traffic Information.
- To Work Together with Other Government Agencies to Serve the Public.
- To Provide Excellent Customer Service.

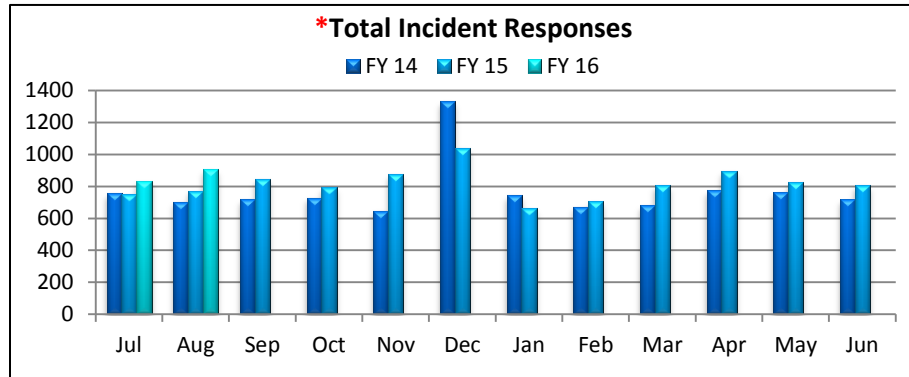
Field Devices Summary

Freeway PTZ Cameras	377	Freeway VMS	97
Arterial PTZ Cameras	450	Surface Street VMS	49
RWIS & Contracted Weather Cameras	211	Portable TOC VMS	7
Viewable Detection Cameras	65	Legacy Trucks Prohibited VMS	21
Total Cameras	1,103	Variable Speed Limit VMS	15
HAR (27 permanent/5 portable)	32	Chain-Up Signs	19
RWIS	98	Total VMS	208
Ramp Meters	63	TMS	543
Express Lane Plazas	73	Traffic Signals	2,128

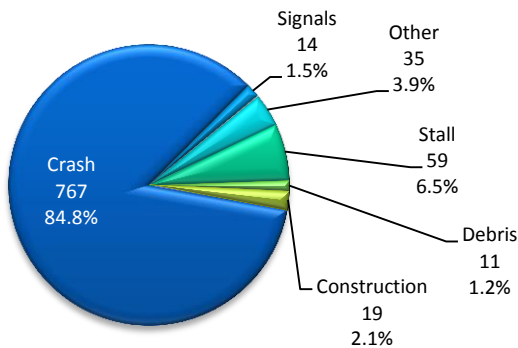
Operations Summary

VMS Messages Displayed	84,041	IMT Assists	2,055
Signal Timing Work Orders	16	Website Visitor Sessions	520,247
Signal Maintenance Work Orders	116	511 Calls	60,697
All New Work Orders	358	Weather Desk Calls	1,296
Incident Responses by the TOC	905	Ask CommuterLink Questions	28
Incident Duration Average Minutes	58	UDOT Traffic Followers and Re-tweets	361,385

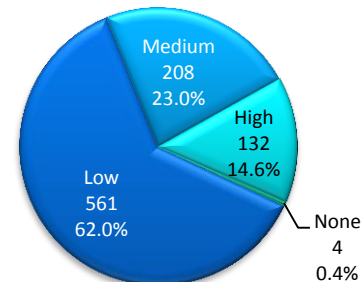
An incident response occurs each time an incident is recorded in the ATMS system. These can be of several types, including crash, construction, debris, stall, congestion, or other. Crashes are separated into three subcategories: property damage, personal injury, and fatal. Each time an incident is created, information is sent to the 511 system, the website, and to the public through email alerts. An incident remains active until it has been completely cleared from the roadway.



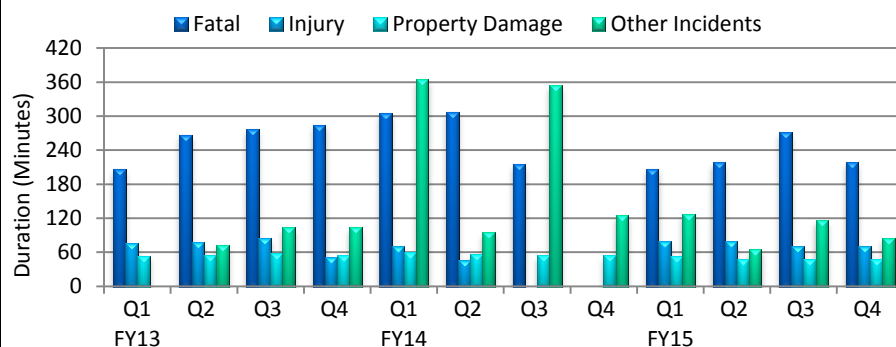
***Incidents By Type for August 2015**



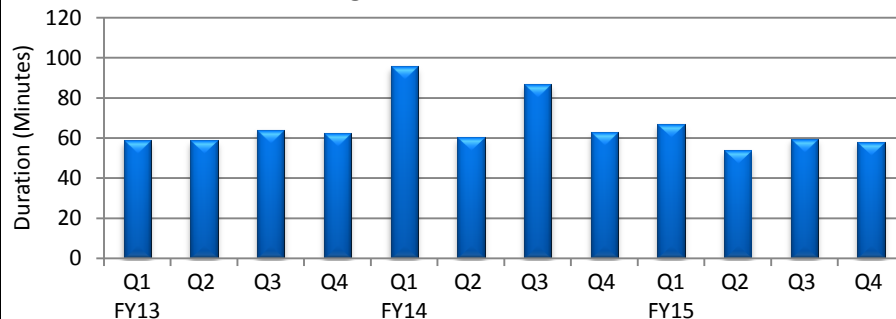
***Incidents by Severity for August 2015**



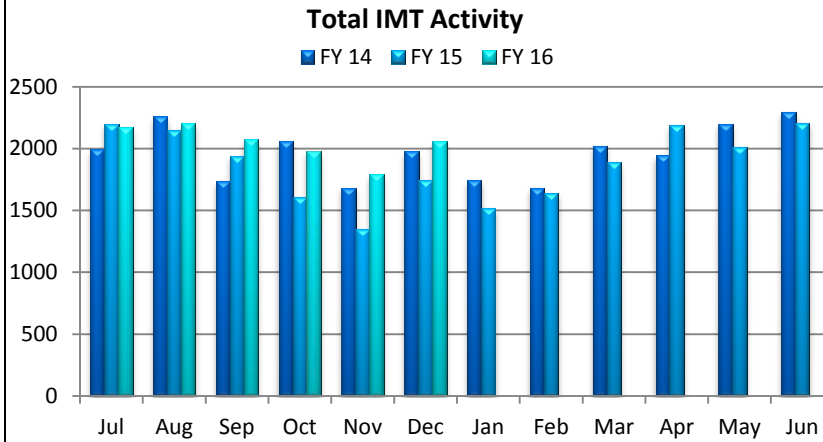
***Average Crash Duration**



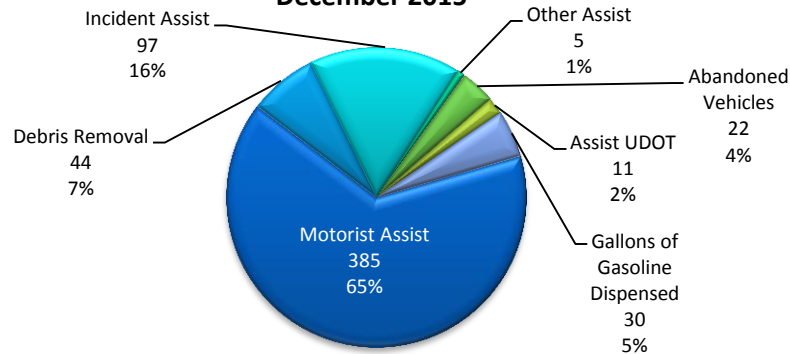
***Average Duration of All Incidents**



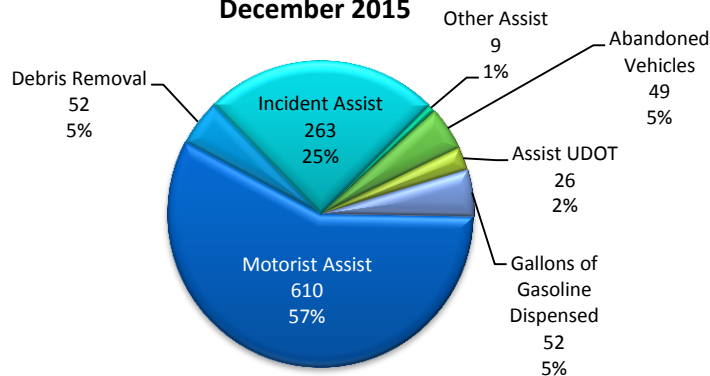
Incident Management Team (IMT) Activities



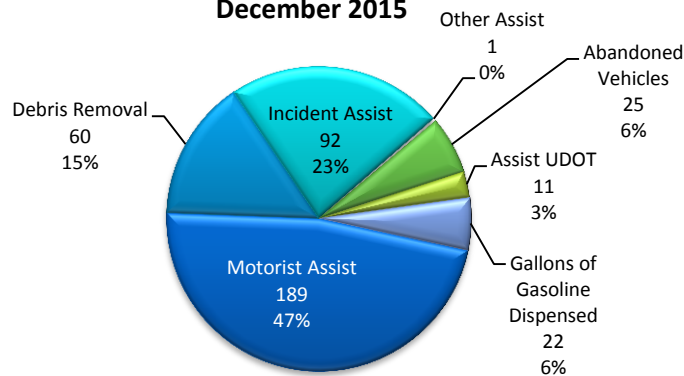
**IMT Activities by Type for UDOT Region 1
December 2015**



**IMT Activities by Type for UDOT Region 2
December 2015**



**IMT Activities by Type for UDOT Region 3
December 2015**



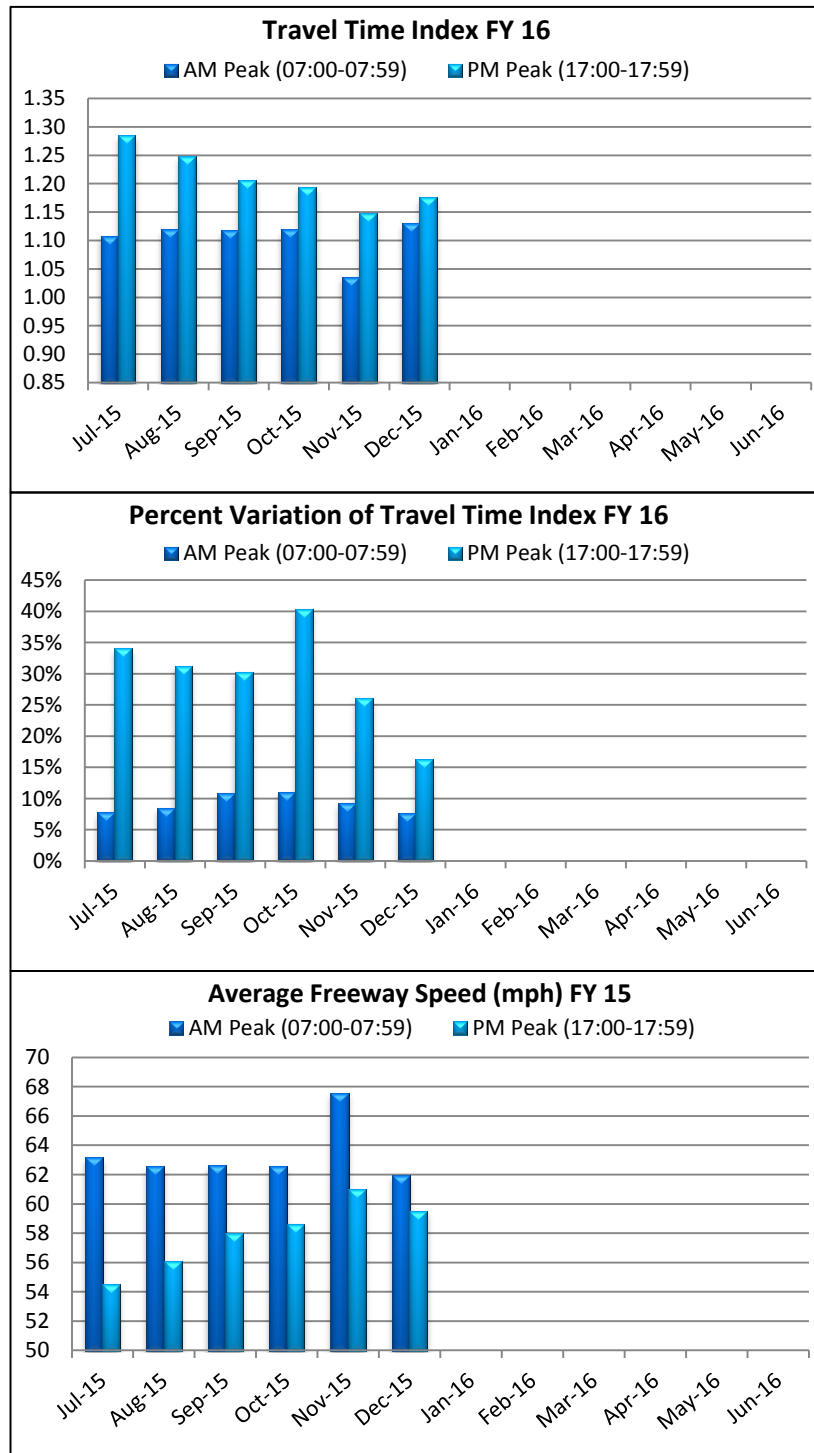
Freeway Traffic Level of Service

Freeway flow measures are taken from the Traffic Monitoring Stations (TMS) located throughout the Wasatch Front. As more TMS sites are installed throughout the state, they will be included in these performance measures.

Travel Time Index: This measure of mobility is based on freeway speeds and is weighted by segment lengths and by the traffic volume. A value of 1.0 represents free-flow speeds. A value of 1.12 indicates that the average vehicle trip takes 12% longer than if that were the only vehicle on the freeway.

Percent Variation of Travel Time Index: The percent variation in the Travel Time Index is a measure of how much the Travel Time Index changes from day-to-day.

Average Freeway Speed: The freeway speed is weighted by volume.



Freeway Traffic Level of Service

Peak Travel Time Index by Segment for December 2015

(+) Direction (NB, EB, Clockwise)

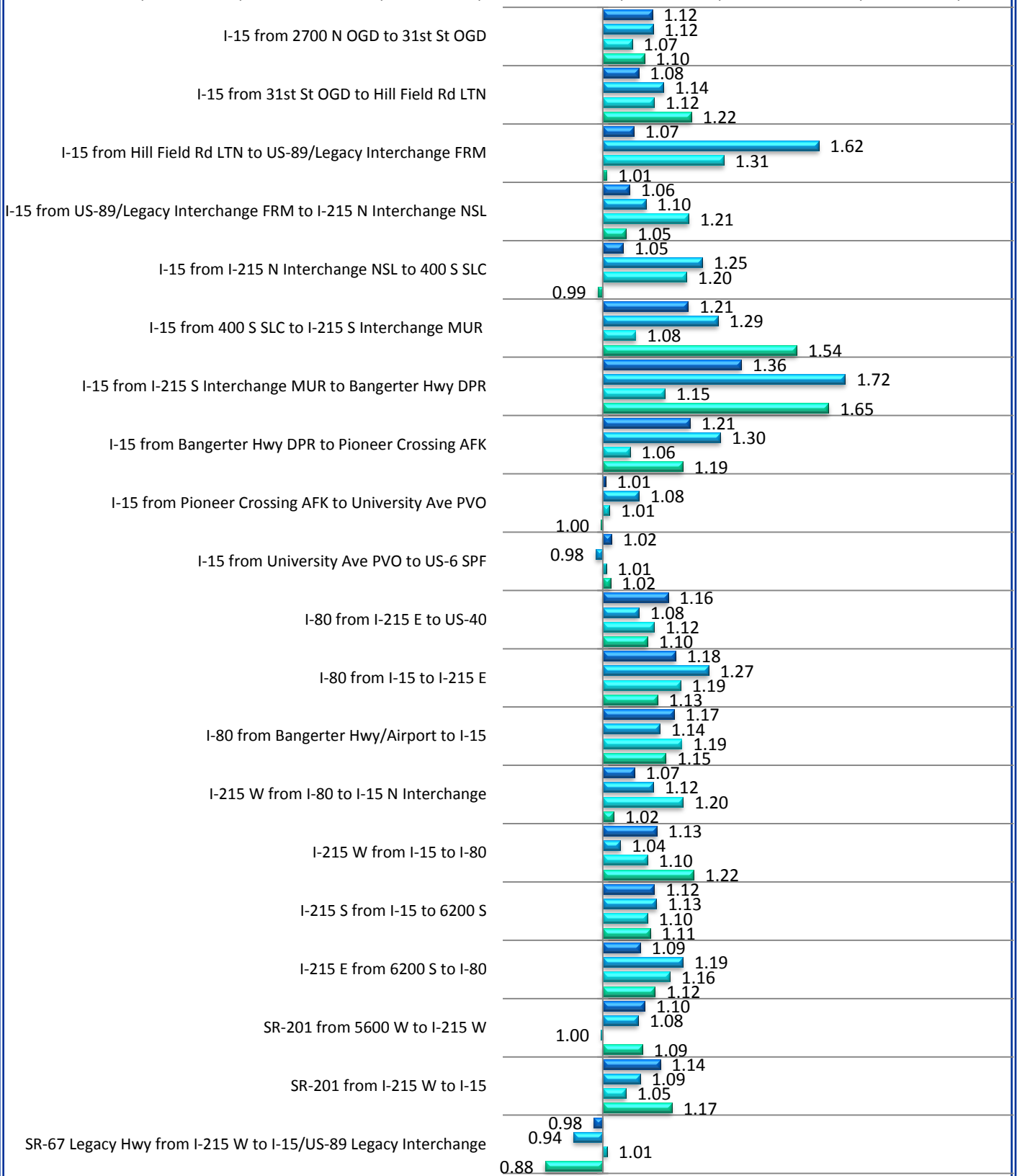
(-) Direction (SB, WB, Counter Clockwise)

■ AM Peak (07:00-07:59)

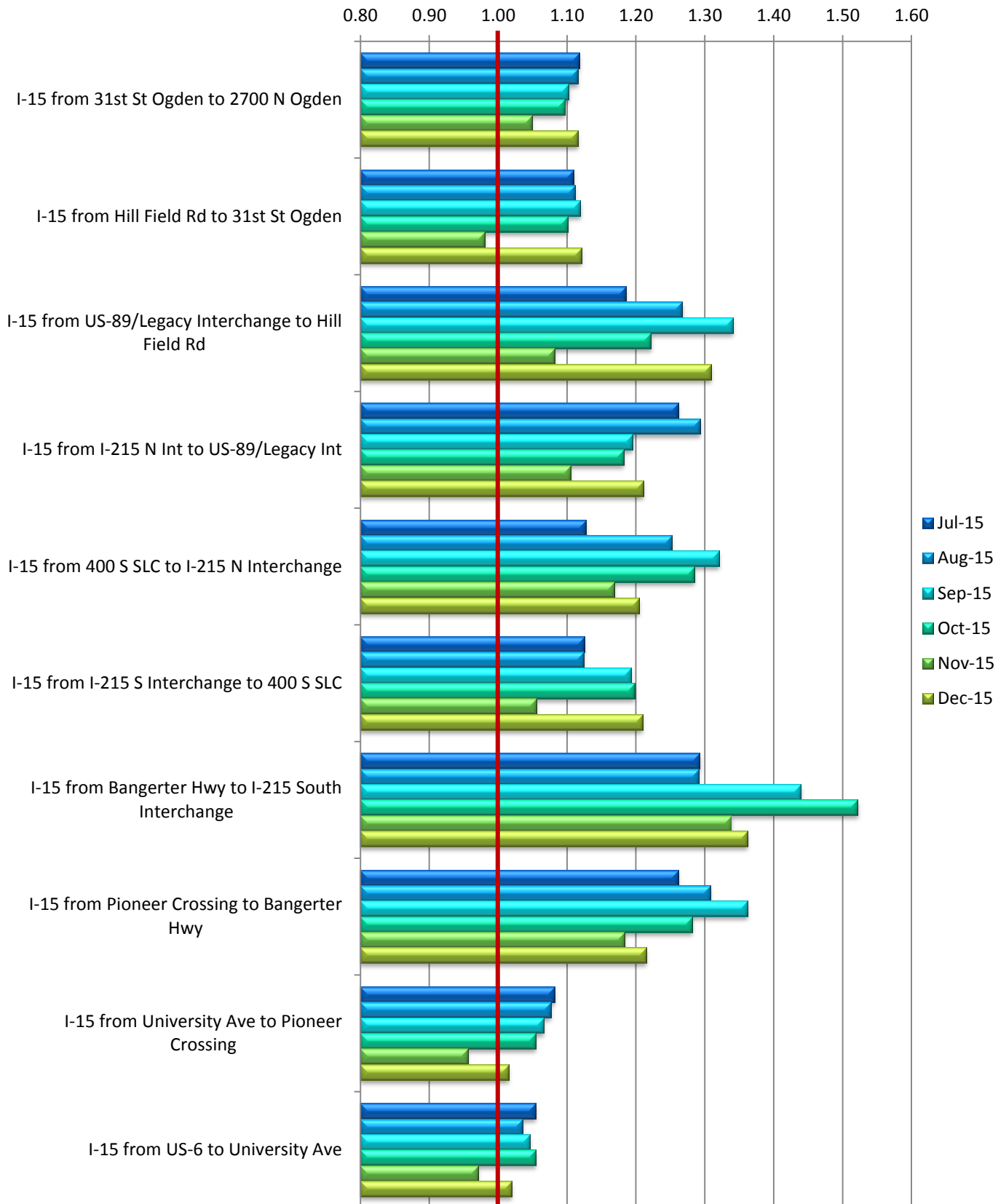
■ PM Peak (17:00-17:59)

■ AM Peak (07:00-07:59)

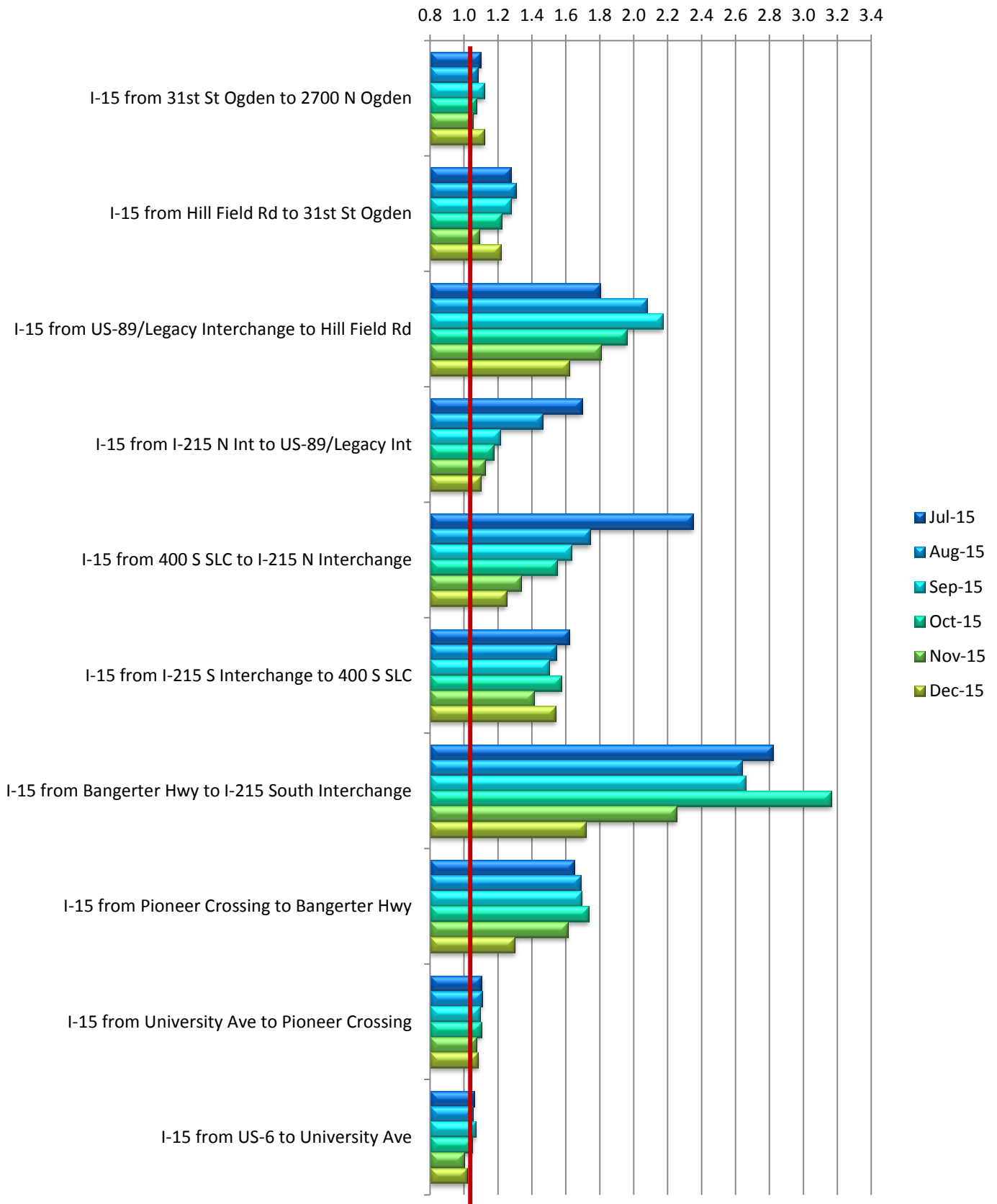
■ PM Peak (17:00-17:59)



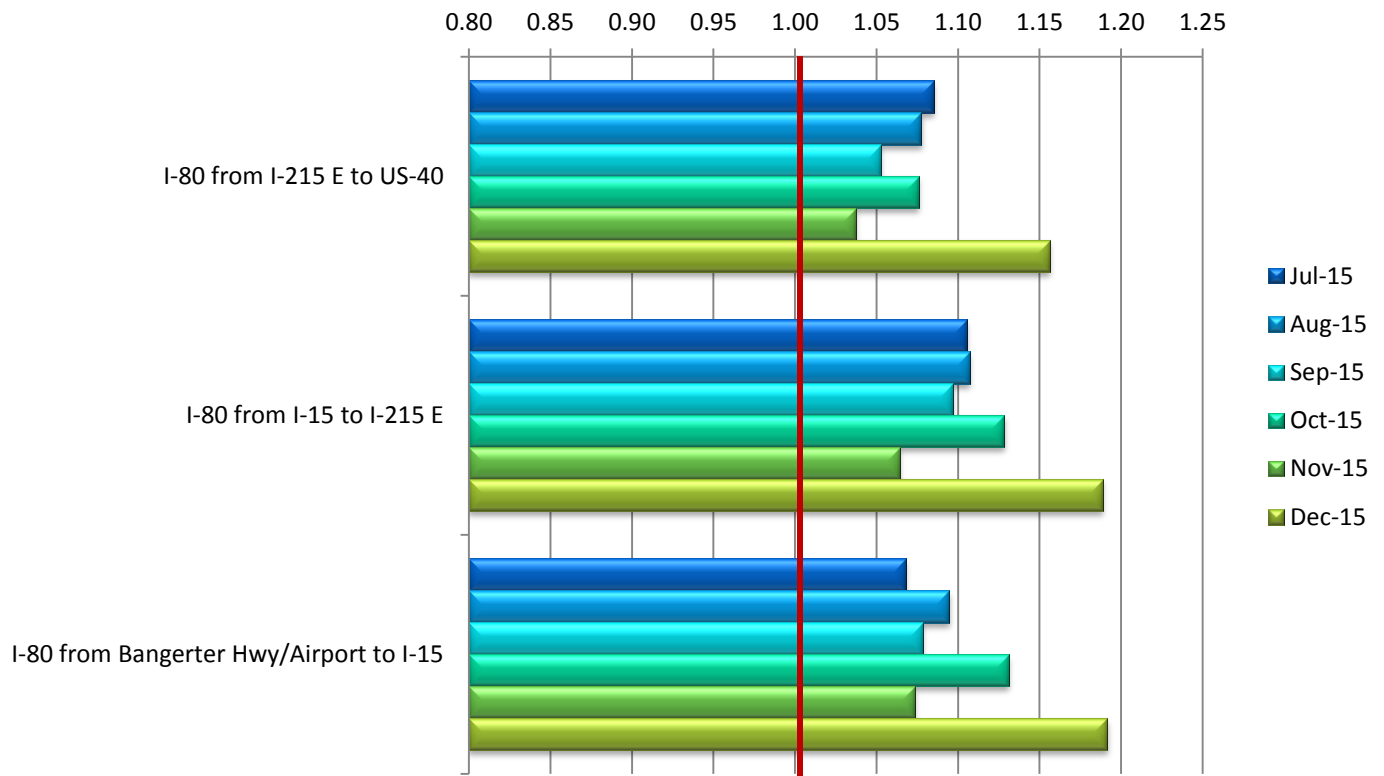
AM Peak Travel Time Index for I-15 FY 16



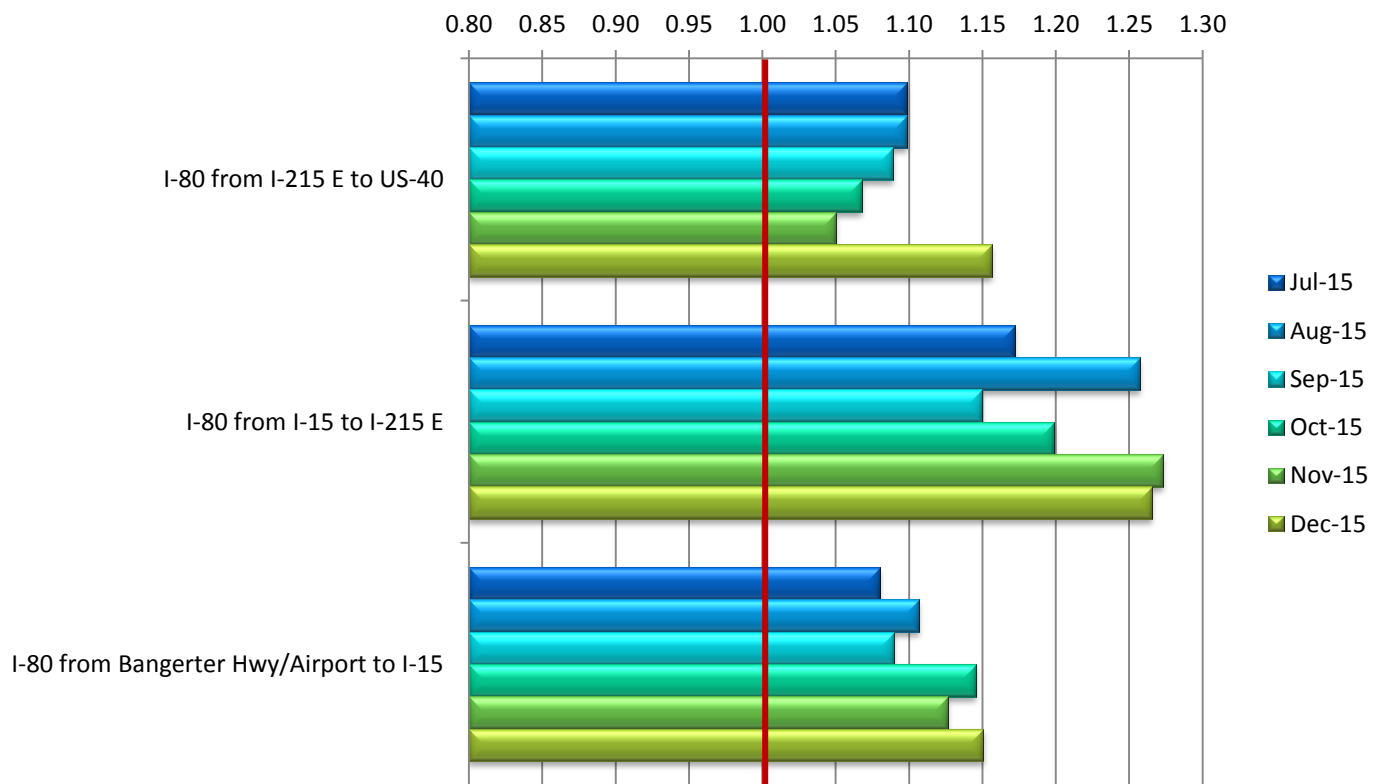
PM Peak Travel Time Index for I-15 FY 16



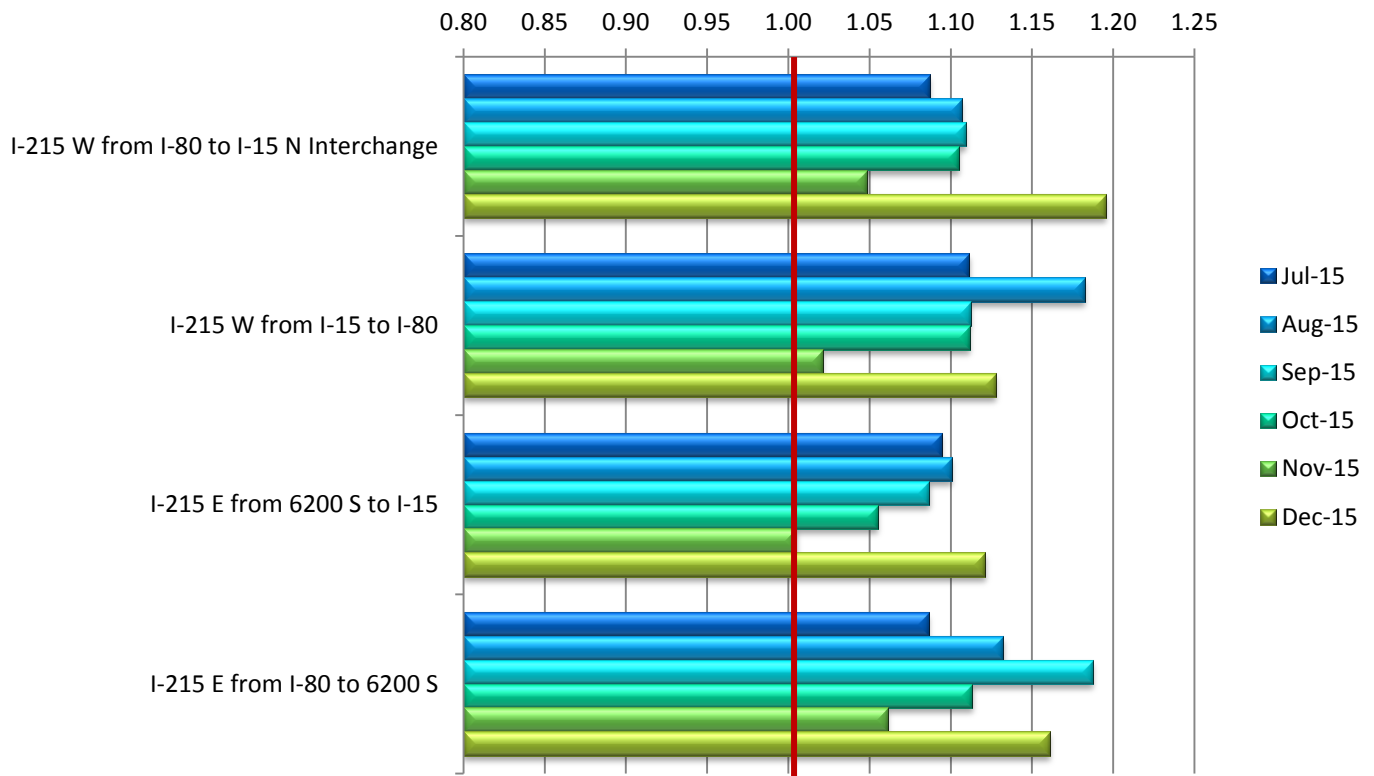
AM Peak Travel Time Index for I-80 FY 16



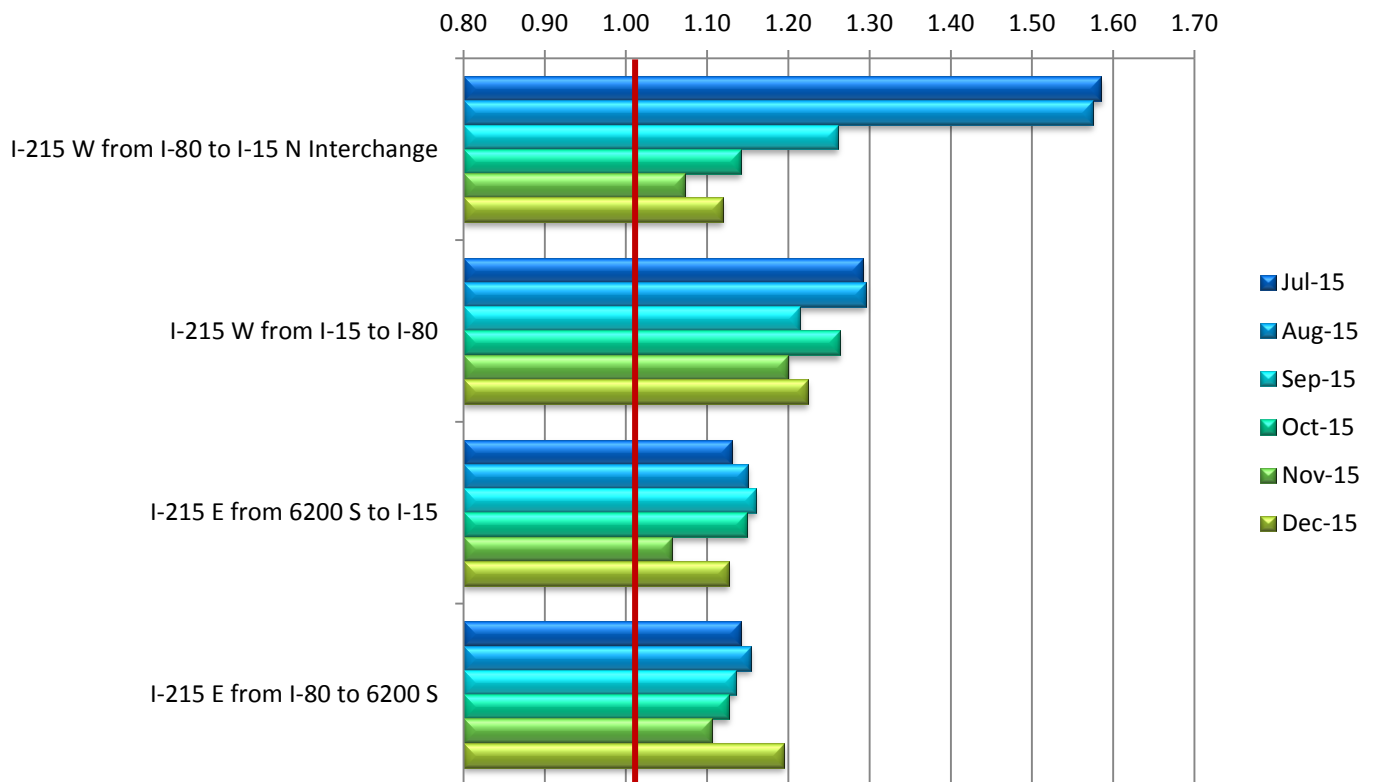
PM Peak Travel Time Index for I-80 FY 16



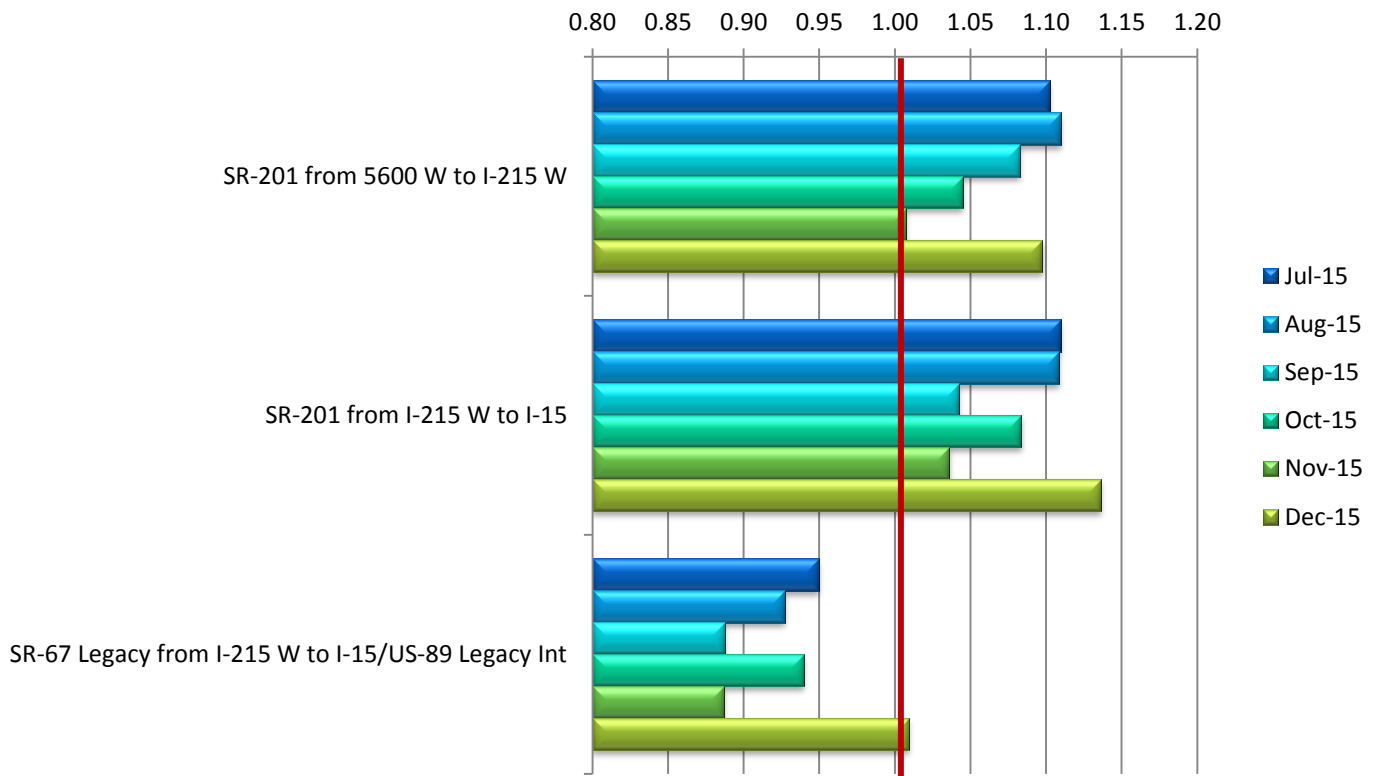
AM Peak Travel Time Index for I-215 FY 16



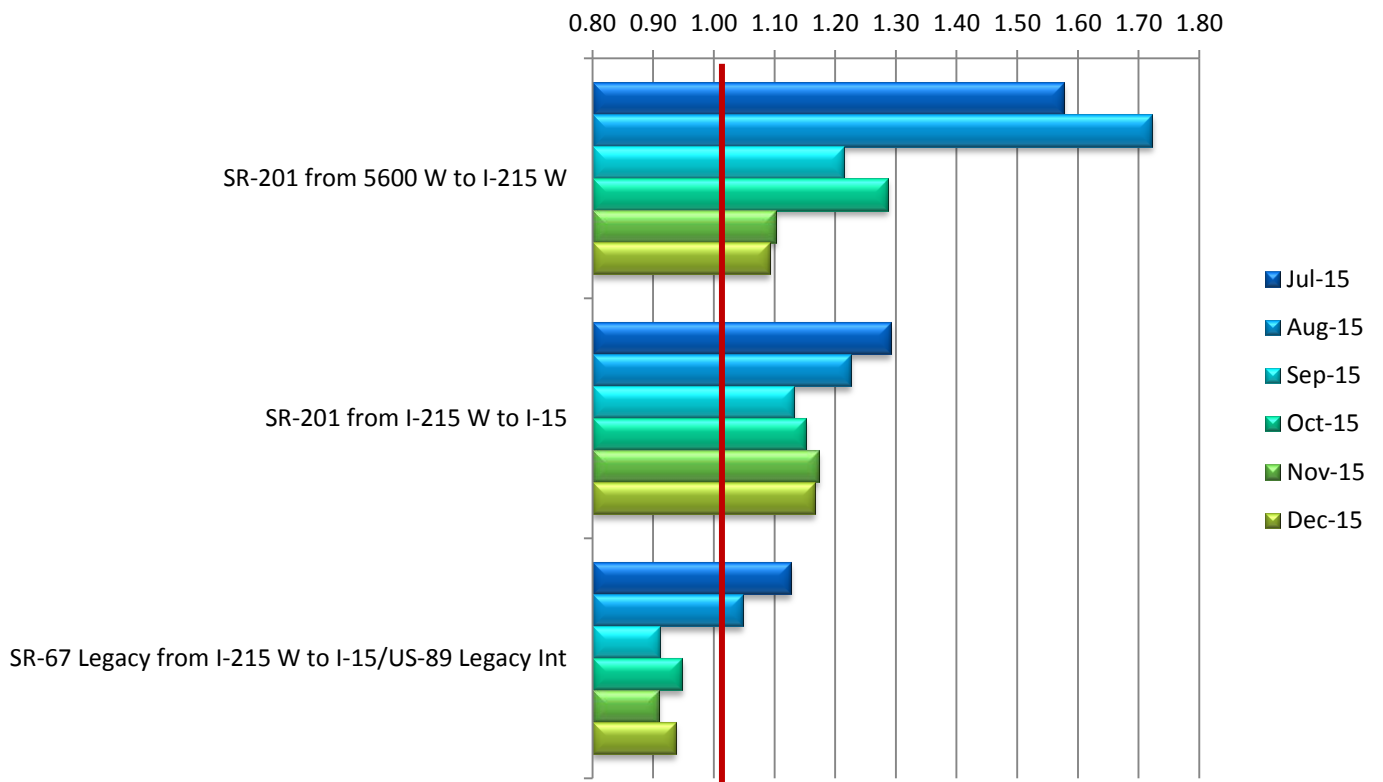
PM Peak Travel Time Index for I-215 FY 16



AM Peak Travel Time Index for SR-201 and SR-67 Legacy Hwy FY 16

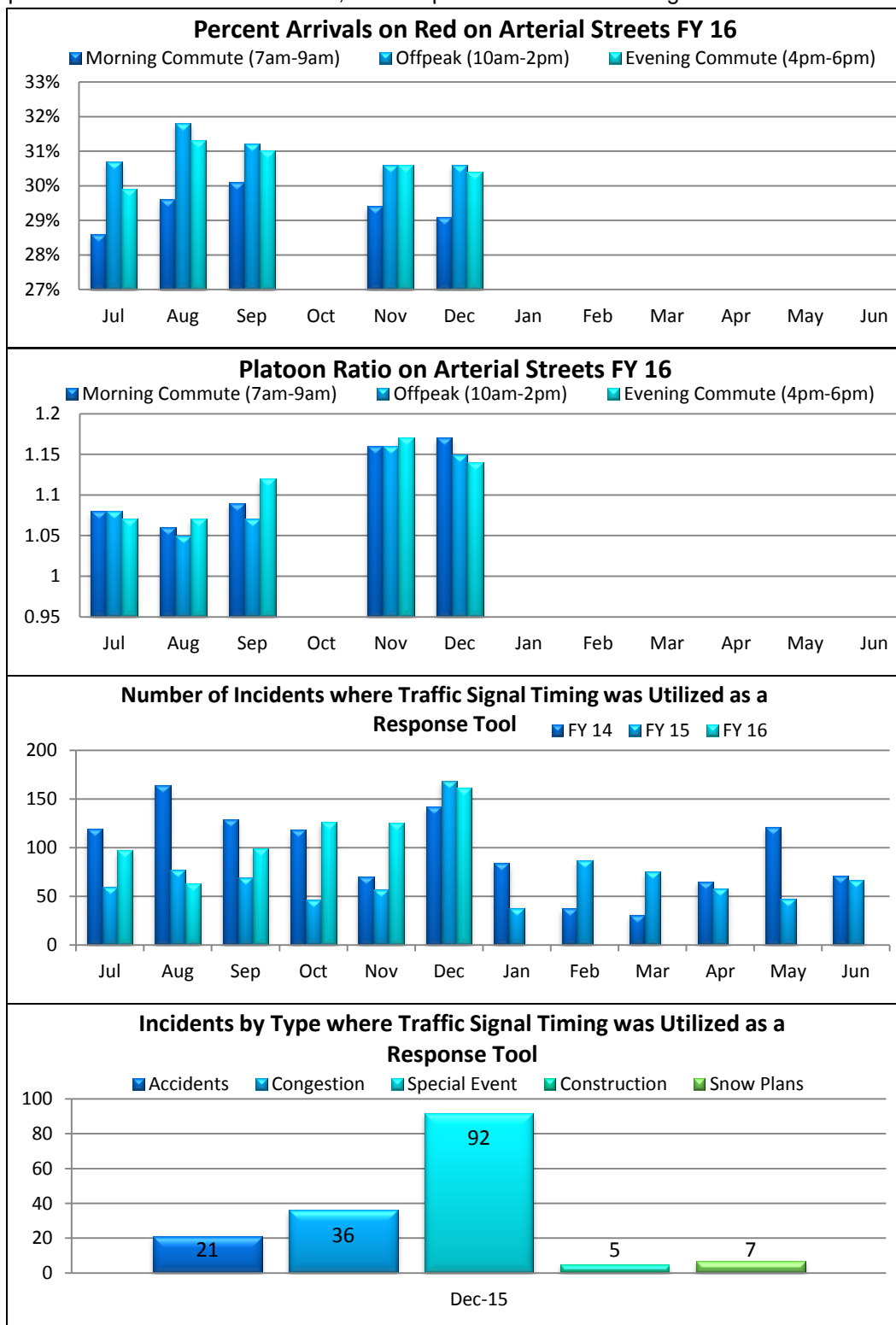


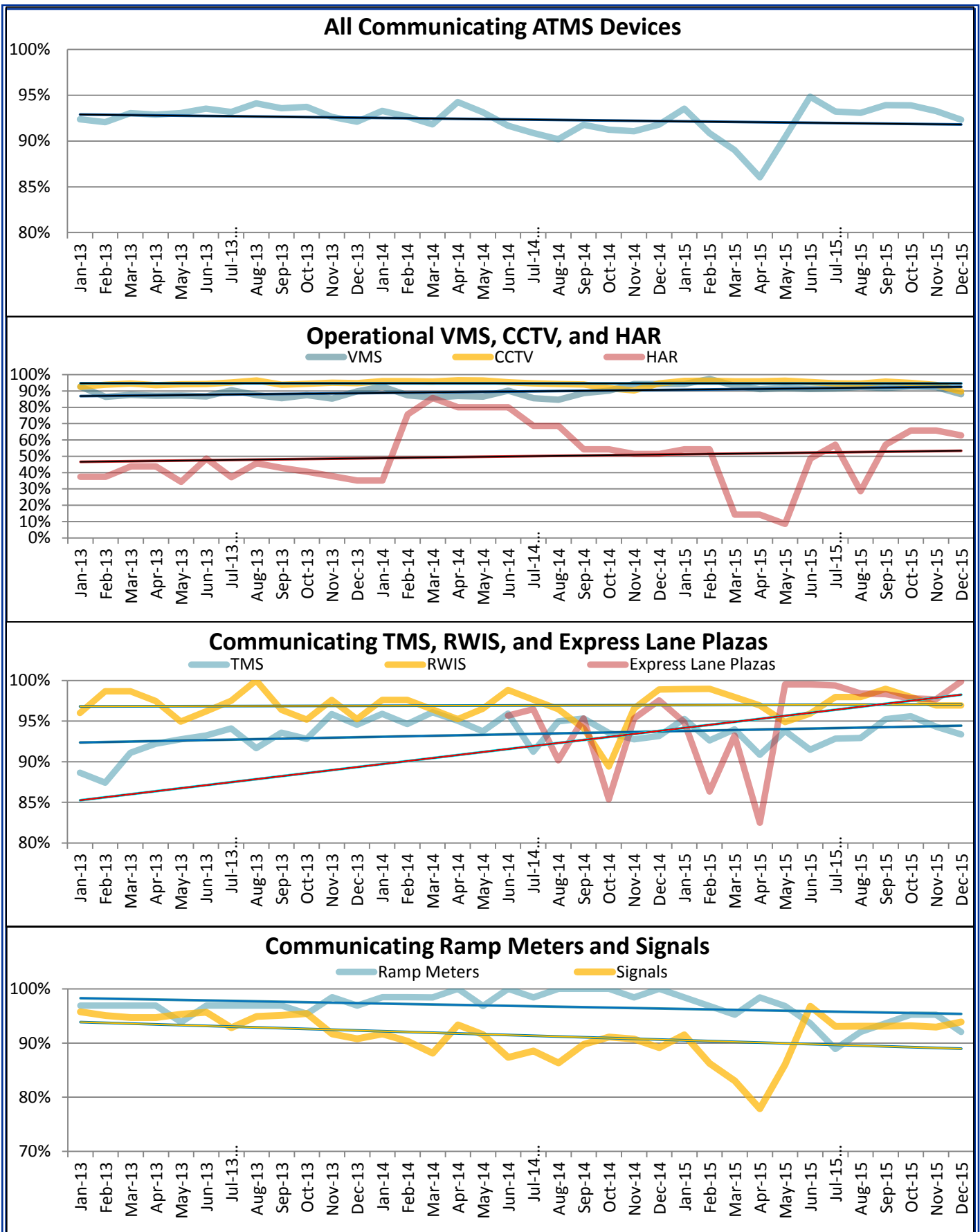
PM Peak Travel Time Index for SR-201 and SR-67 Legacy Hwy FY 16



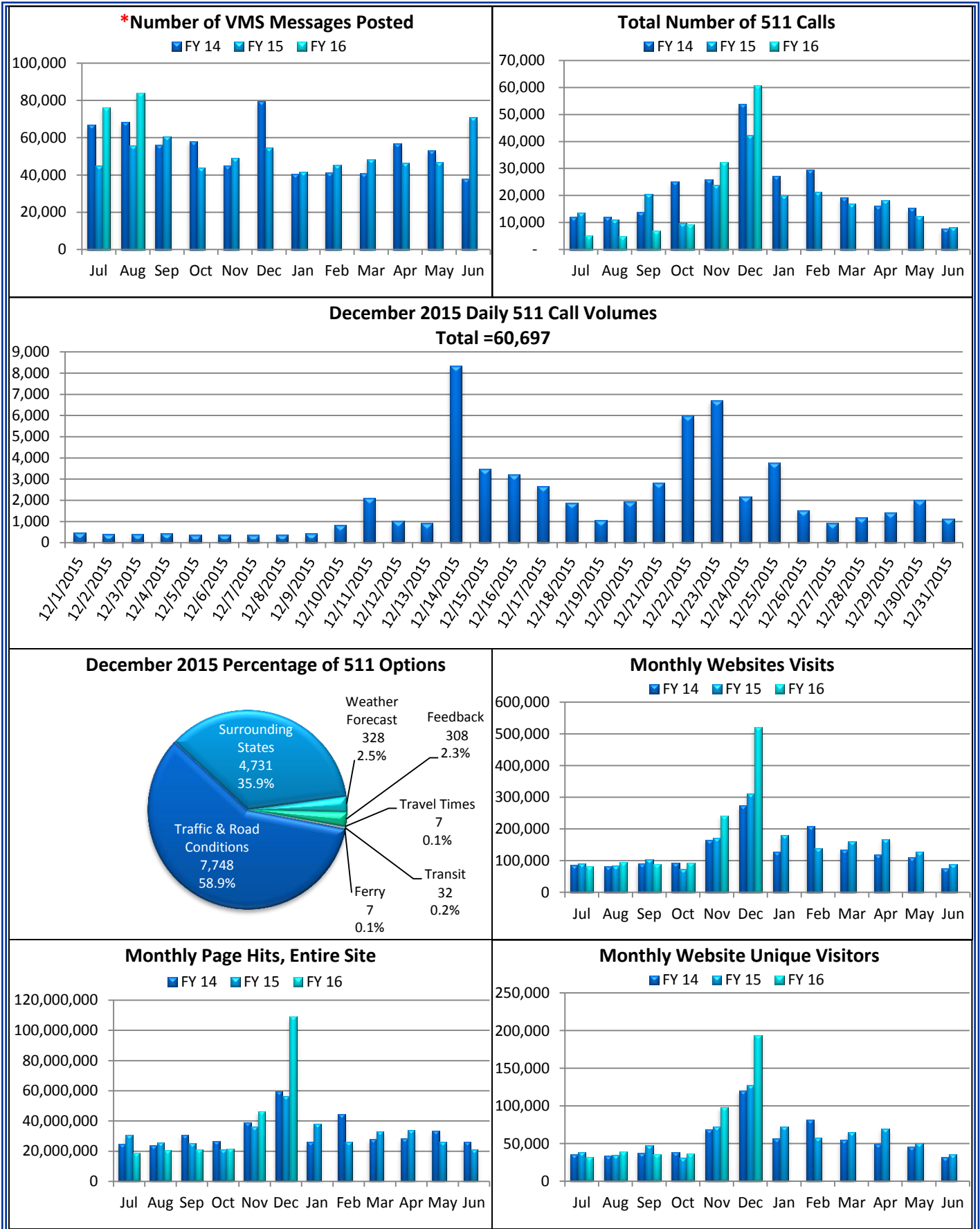
Arterial Traffic Level of Service

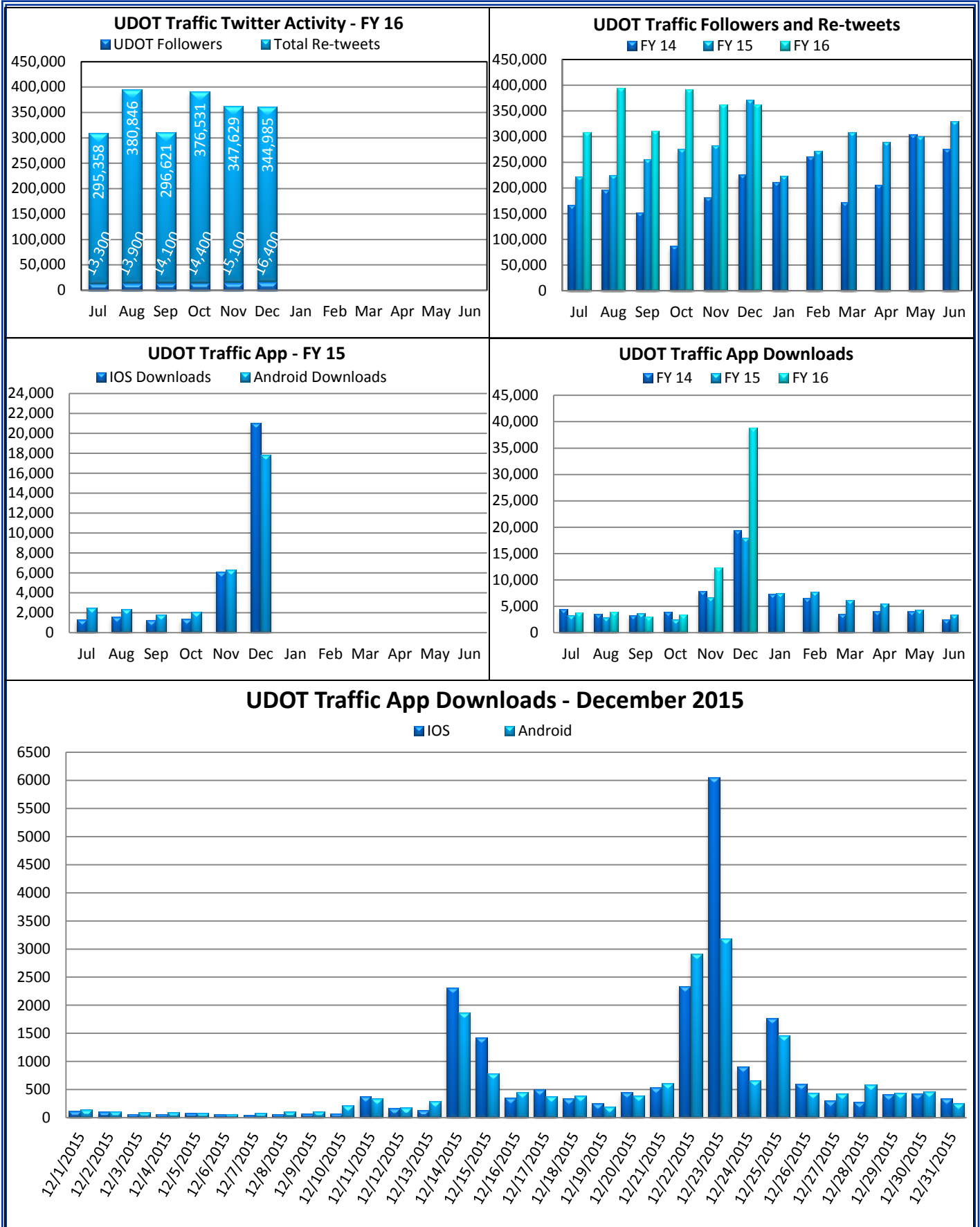
The percent arrival on red along the arterial statistics are generated automatically through the automated traffic signal performance measures, which show real-time and historical functionality at signalized intersections. The system automatically time-stamps when each vehicle arrives at the intersection and then compares the detection time-stamp if the phase was green or red. The percent arrival on red data is averaged over the 24 hours of the day and days in the month. . The lower charts shows the number of incidents where traffic signal timing was modified in order to help traffic flow around closed lanes, or to help relieve excessive congestion.



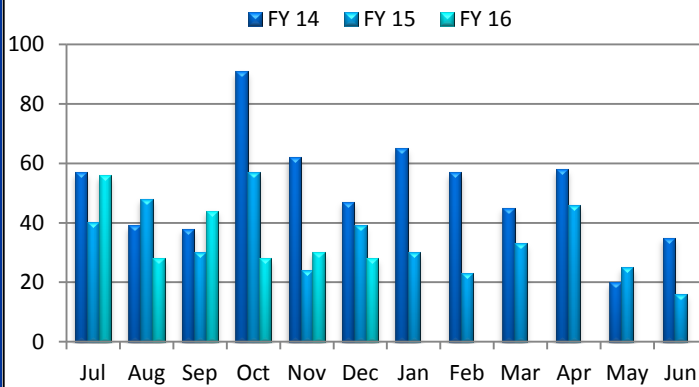


Traveler Information **Note – No VMS Data received Since August*

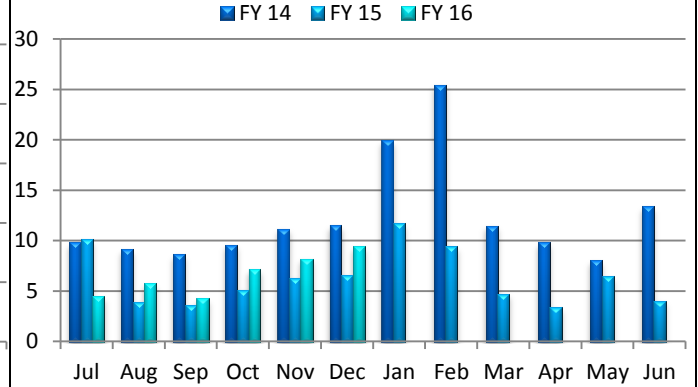




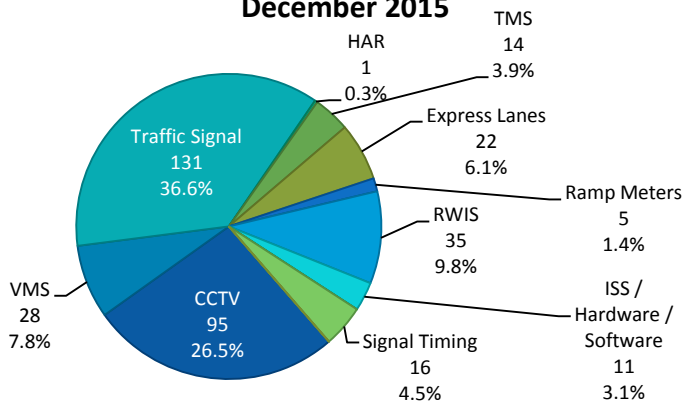
Number of "Ask UDOT Traffic" Questions



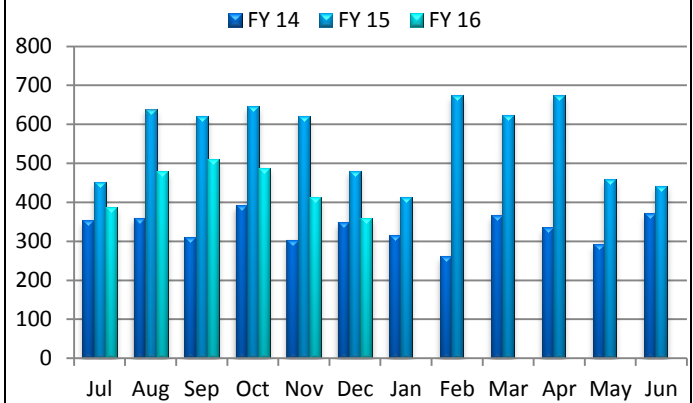
Overall Average Work Order Turnaround Days



New Work Orders by Device Type December 2015

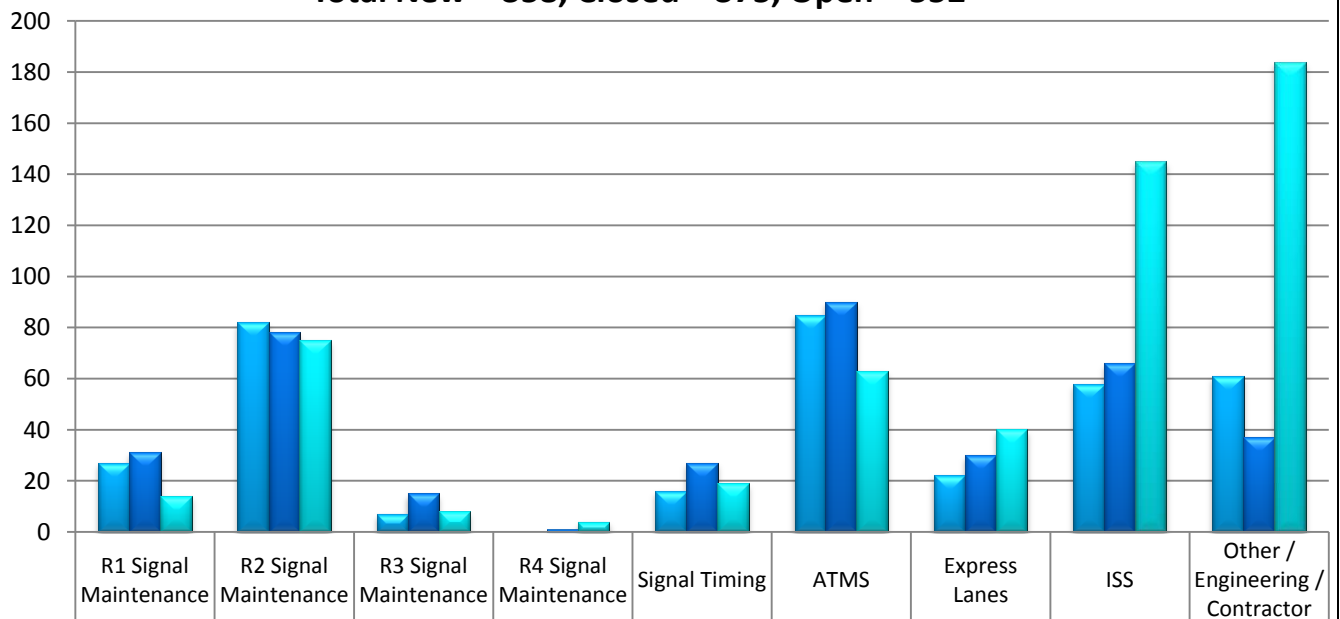


Number of New Work Orders



Work Order Statistics by Group - December 2015

Total New = 358, Closed = 375, Open = 552



	R1 Signal Maintenance	R2 Signal Maintenance	R3 Signal Maintenance	R4 Signal Maintenance	Signal Timing	ATMS	Express Lanes	ISS	Other / Engineering / Contractor
New	27	82	7	0	16	85	22	58	61
Closed	31	78	15	1	27	90	30	66	37
Open	14	75	8	4	19	63	40	145	184



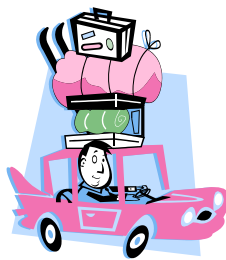
CONTROL ROOM

Operators managed 1514 incidents and 2106 phone calls during the month with the first snow storms of the season having major traffic impacts. They posted a significant number of VMS messages, emergency alerts, 511 messages all while monitoring events, adjusting signal timing plans and registering work orders for devices needing attention by the ATMS maintenance crews. Monday Messaging, public service announcements, and air quality alerts were also posted throughout the month in addition to the weather related needs. The Control Room also managed messaging for Chain/Snow Tire/4x4 restrictions and avalanche control road closures.

Work continued on several construction projects, including the I-15 Point Project well into December, and the control room provided support as needed.

TRAVELER INFORMATION

Traveler Information gave a live radio interview about the UDOT Signal Performance Metrics on Connecticut Public Radio.



WEATHER INFORMATION

The Weather Room team had 1061 overall UDOT weather interactions, 259 outgoing weather alerts, 19 NWS collaborations, and 41 road weather alerts.

For the state as a whole, December was wetter than normal and temperatures were close to average. The last two weeks saw the most impact statewide.

Salt Lake International Airport was one degree above average, but also saw the biggest snow storm since winter 2013-2014 with 15.9 inches falling at the airport for the month of December, 2.7 inches above average.

The team participated in several initiatives. Region 2 hosted a meeting to discuss an improved response to unforeseen weather impacts. As a result of the meeting, uncertainty concern was added to all regional forecasts, providing forecasters the opportunity to discuss variability in their forecasts. I-80 Corridor TMC Winter Coordination Meeting discussed ways DOTs between California and Wyoming can share information about significant events that impact interstate travel. The Road Weather Management Virtual Meeting – Western Regional Roundtable discussed ways to enhance interstate and interagency interaction and collaboration.



TRAFFIC OPERATIONS AND REPORTING

Traffic Operations and Reporting has been involved with:

- ❖ The U of U Roundabout.
- ❖ 10600 South Interchange.
- ❖ 100 East in American Fork.
- ❖ Bangerter Highway Interchanges.
- ❖ 9000 South Interchange Improvements.
- ❖ I-80/State Street EIS.
- ❖ I-80 Corridor Planning.
- ❖ Provo Orem BRT.
- ❖ Moab Studies.
- ❖ Managed Motorways.
- ❖ Congestion reporting.
- ❖ IMT analysis.
- ❖ Media training.
- ❖ Mountain View Corridor Safety Evaluation.
- ❖ PeMS software procurement.
- ❖ Lehi Technology Corridor.
- ❖ Bluff Street/Sunset Blvd. MOT.
- ❖ US-6 MOT.
- ❖ I-80 traffic modeling.
- ❖ Region 3 planning in Saratoga Springs, Springville, and Spanish Fork.
- ❖ SR-9 reconstruction projects.

ITS ASSET MANAGEMENT

ITS Asset Management integrated ten Express Lane plazas, three Freeway CCTV, a surface street CCTV, an RWIS CCTV, and eleven new signals. A detection CCTV was removed from service. The team also continued to check CCTV image capture files and report on the number of cameras with bad images.

ATMS MAINTENANCE

Teaming

The Lab and Field teams joined forces to replace several defective VMS display panels, and with the Express Lane Team, performed preventative maintenance on several HOV sites. They also replaced a set of Sensys pucks.

Field Team

The Field team completed integrating 12 ethernet radios, as well as updating the as-built drawings. They completed LFOTs for 500 North Columbus and 2100 South at State Street. The team found several defects during the LFOT site at Redwood Road and Pony Express. This site will be inspected again when the contractor has made corrections and the site is ready.

Lab Team

The Lab team tested 11 ATMS devices, configured and burned in six signal cabinets, released a total of seven signal cabinets to contractors to be installed. LFOTs were completed for the Beaver Ridge Climbing Lane project. The operating system and firmware on 20 new traffic signal controllers were updated. The Lab Team closed 18 work orders during December.

Express Lanes Team

The Express Lanes team rebooted three VTMS, one AP-1, five lane controllers, and eight lasers. Eight lane controllers were repaired and configured. Preventative maintenance was performed on ten cabinets and three TSI lights were replaced along with a light housing assembly. The team is continuing ongoing cross training with other ATMS Maintenance team members.



Region 1

- ❖ **Statewide Signal Interconnect:** PineTop Engineering has been working on the design for this to advertise.
- ❖ **28th Street and Washington:** Under construction.
- ❖ **SR-126 & 1300 N:** Under construction.
- ❖ **I-15; SR-30 to the Idaho State line:** This project has been designed by PineTop Engineering and is ready to advertise. This project needs major funding for ATMS. This project may be part of a partnership with a telecom.
- ❖ **Layton Interchange:** This project is in design.
- ❖ **SR-127 & 3000 W:** Under construction.
- ❖ **Logan Main Street Fiber Interconnect:** This project has been completed.
- ❖ **US-89; SR-193 to Cornia Drive:** This project is complete.
- ❖ **US-89; Antelope Drive Extension:** This project is under construction.
- ❖ **Logan CCTV's:** This project is under construction.

Region 2

- ❖ The Variable Message Sign at I-15 Southbound at 11400 S was integrated and became operational. The older sign at 12800 South was removed as well.
- ❖ Design was complete for adding two new cameras on the SR-201 freeway at the I-215 West interchange. This area has spots that are difficult to see. The new locations were adjusted to not interfere with the replacement of the I-215 bridge over SR-201. Several design and material efficiencies will allow for installing two cameras instead of one. This will allow for better coverage in the area on both sides of the interchange.

Region 4

- ❖ **St. George:** This project is complete, except for some city and UDOT fiber coordination.
- ❖ **Pine Creek Truck Climbing Lane:** This project is nearly complete.
- ❖ **Fiber upgrade for US-6, Helper and Price Signal Integration:** Telecom work has been completed. UDOT is ready to complete the final contractor package for a procurement contract. We are waiting for decisions to be made in regard to additional solar powered sites to be added to the construction package.
- ❖ **Beaver Truck Climbing Lane:** Project is under construction.
- ❖ **I-15; North Beaver to Manderfield:** This project is complete. Solar sites and CCTV locations to be re-located are being mitigated.



ITS Standards and Specifications

Narwhal Group continued work on the NEC review of all Standards and Specifications. The first draft of recommended revisions arrived and was reviewed with Narwhal's Electrical Engineers. A meeting was held to review and revise the Freeway Management portion of the AT Series Standard Drawings. The drawings are AT 2A, AT 2B, AT 3, AT 4, AT 5A, AT5B, AT5C.

No decisions were made this month regarding Specification 13554 Polymer Concrete Junction Box and changing the description placed on pull box lids.

Work on the ATMS Solar Powered Site Standards continued.

Procurement

A meeting was held to discuss the Wanco VMS contract renewal. The VMS are used for rural traveler information. The new contract bid will be developed to purchase a portable VMS Board, plus a parts list, without the trailer.

Special Projects

The current 2012 Standard Specifications, Supplements and Drawings were downloaded, printed, and placed in 3-ring binders for reproduction. Ten volumes were made to be passed out to the TOC Staff in order to begin the complete review and preparation of the 2017 Edition.



When Eagles Soar!!

Clark Fox, a junior in high school from Riverton, Utah decided to choose the project of collecting stuffed animals to be further distributed to Richard and Diane Shelley's stuffed animal program for his Eagle Project. He was totally surprised with the result.

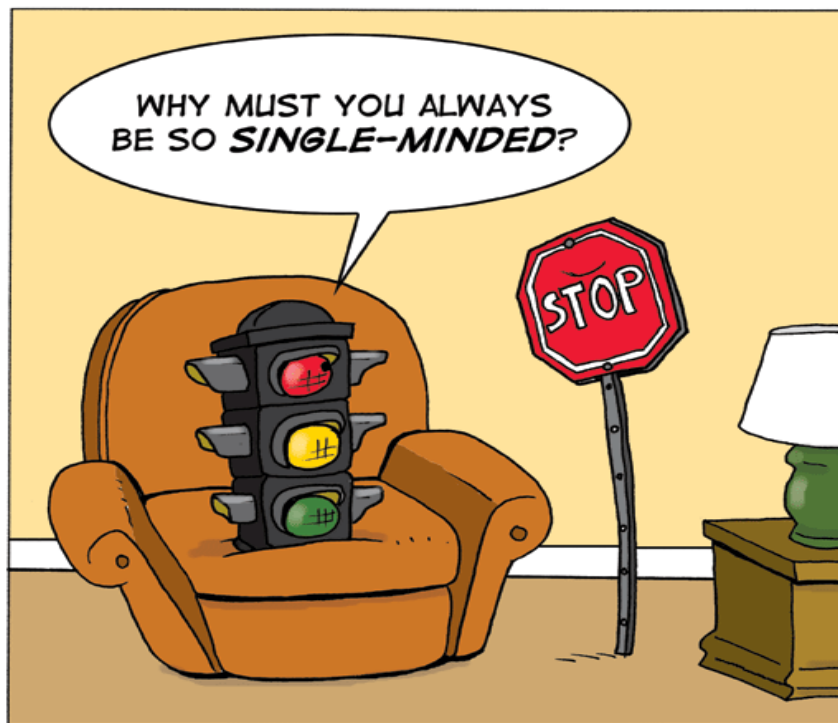
Clark collected more than 600 stuffed animals. These stuffed animals will be distributed after some freshening up by Diane to the IMT department, UHP, Road Home and local women's shelters. Clark heard of the program and thought it had great merit but did not expect the response he received. Clark delivered the stuffed animals to the TOC in December and was thanked on behalf of the organizations that will receive these stuffed animals by Rob Clayton, Jeff Reynolds and Richard Shelley.

Jeff, as a first responder from the IMT department expressed to Clark the happiness and joy along with the calming effect he sees first hand these stuffed animals bring to the children when an accident or incident happens on the highway.

Clark and his family were then given a tour of the Traffic Operations Center by Wayne Jager to show all the areas that the TOC covers.

Clark has a love of "Robotics" so maybe someday we'll see Clark back at UDOT working on a Drone Project in the future.

Good Luck Clark and thanks again!!



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12-12



Acronyms

CCTV	Closed Circuit Television	DPS	Department of Public Safety
EIS	Emergency Information System	HAR	Highway Advisory Radio
I2TMS	Integrated Interagency Traffic Management System		
ITS	Intelligent Transportation System	LFOT	Local Field Operations Test
MIC	Manager in Charge	MOT	Maintenance of Traffic
RWIS	Road-Weather Information System	TAC	Technical Advisory Committee
TMD	Traffic Management Division	TMS	Traffic Monitoring Station
TOC	Traffic Operations Center	VMS	Variable Message Sign

